

**Notice of Allowability**

Application No.

09/882,534

Applicant(s)

DERDERIAN ET AL.

Examiner

Art Unit

Toniae M. Thomas

2822

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the telephone interview w/James Lake on 04 August 05.
2. ☒ The allowed claim(s) is/are 32,33,35-37,39-41,43-46 and 48-56.
3. ☒ The drawings filed on 14 June 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 05/12/05; 08/04/05.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
**Mary Wilczewski**  
Primary Examiner

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with James Lake on 04 August 2005.

#### ***Amendment***

3. The application has been amended as follows:

#### **In Claims**

- |                      |   |
|----------------------|---|
| In claim 32, line 6, | --containing Al <sub>2</sub> O <sub>3</sub> and-- has been inserted after<br>"barrier layer" and before "having"; |
| In claim 36, line 5, | --, containing Al <sub>2</sub> O <sub>3</sub> ,-- has been inserted after<br>"monolayers" and before "and";       |
| In claim 40, line 7, | --containing Al <sub>2</sub> O <sub>3</sub> and-- has been inserted after<br>"barrier layer" and before "having"; |
| In claim 45, line 9, | --containing Al <sub>2</sub> O <sub>3</sub> and-- has been inserted after<br>"layer" and before "having".         |

Claims 34, 38, 42, and 47 have been cancelled.

#### ***Reasons for Allowance***

4. The following is an examiner's statement of reasons for allowance: the prior art of record does not anticipate, teach or suggest a capacitor

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construction substantially as claimed, wherein the capacitor construction comprises an atomic layer deposited oxygen diffusion insulative barrier layer between a first capacitor electrode and a capacitor dielectric layer and/or between the dielectric layer and a second capacitor electrode, the barrier layer containing  $\text{Al}_2\text{O}_3$  and having a thickness of less than 10 Angstroms.

Furthermore, the prior art of record does not anticipate, teach or suggest a capacitor construction substantially as claimed, wherein the capacitor construction comprises an oxygen diffusion insulative barrier layer over a first capacitor electrode, the barrier layer comprising a chemisorption product of first and second substantially saturated precursor monolayers containing  $\text{Al}_2\text{O}_3$  and having a thickness of less than 10 Angstroms.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toniae M. Thomas whose telephone number is (571) 272-1846. The examiner can normally be reached on Monday through Friday from 8:30 a.m. to 5:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on (571) 272-1852. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



TMT

22 August 2005

**Mary Wilczewski**  
**Primary Examiner**